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July 7, 2016

*Via Electronic Submission*

*Ex parte*

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Portals II, Room TW-A325
Washington, DC 20554

**Re:** *Technology Transitions*, GN Docket No. 13-5*; AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353

Dear Ms. Dortch:

On July 5, Frank Simone, Terri Hoskins and the undersigned of AT&T met with Claude Aiken, Legal Advisor to Commissioner Clyburn, and met separately later the same day with Travis Litman, Senior Legal Advisor to Commissioner Rosenworcel concerning the above-captioned matters. The purpose of the meeting was to discuss the Commission's FNPRM, Establishing Clear Standards to Streamline Transitions to an All-IP Environment.[1] During these meetings, AT&T discussed the attached document which outlines AT&T's concerns and suggestions for the Commission's consideration.[2]

In discussing AT&T's view on adopting a Network Performance latency requirement for replacement voice services, AT&T suggested that any such requirement should be no lower than 200 ms mouth-to-ear. It was pointed out to AT&T's representatives that the Commission's *CAF II Order* adopted a 100 ms latency requirement for broadband service to be eligible for CAF II support. However, AT&T's proposal of a 200ms latency threshold is entirely consistent with the *CAF II Order*. In fact, the *CAF II Order* adopted the same threshold saying, "ITU Standard G.114 provides that consumers are "very satisfied" with the quality of VoIP calls up to a mouth-to-ear latency of approximately 200 ms . . . Therefore, we conclude that a reasonable approach is a framework that should result in mouth-to-ear latency of 200 ms or less."[3]

While there is alignment between AT&T and the Commission regarding a mouth-to-ear latency threshold of less than 200 ms, the Commission should not adopt the certification methodology and the 100 ms threshold applicable to ISPs in the *CAF II Order* as the Network

[1] FCC 15-97, Rel. August 6, 2015.
[2] The attached document includes a non-substantive revision to the document reviewed during the above-referenced meetings.
[3] Connect America Fund, WC Docket No. 10-90, *Report and Order*, Released Oct.31, 2013 at ¶ 20.

Performance latency criterion for a 214 discontinuance for legacy voice services because the 100 ms threshold cannot be applied to wireless voice services. Specifically, in the *CAF II Order*, the Commission established 100 ms as the threshold applicable to the roundtrip path of a conversation from the input device to the Internet core.[4] However, to date, the network architecture for wireless voice service does not utilize Internet Protocol or an Internet Exchange Point. As a result, wireless voice service would not qualify as an adequate replacement service in the proposed 214 process simply because of its architecture, regardless of the actual quality of service that it provides, and despite the fact that millions of Americans have already replaced POTS services with wireless voice. This absurd result can be avoided by adopting a threshold of less than 200 ms measured mouth-to-ear.

Please do not hesitate to contact me with any questions regarding this matter.

Sincerely,

/s/ David L. Talbott

ATTACHMENT

cc: C. Aiken
T. Litman

[4] *Id.* at ¶ 22; *See also* para. 23 (An "Internet Exchange Point" is the closest designated Internet core peering interconnection point)

**ATTACHMENT**

## Technology Transitions, GN Docket No. 13-5

Based on recent discussions with Staff, it is AT&T's position that there are three issues that should be corrected prior to a Final Order being adopted by the Commission.

1) Staff proposes a requirement that carriers offer a low latency option on voice service under the recommended streamlined process. The low latency option was proposed as data service criterion and is an illogical substitute criterion for voice services. The Commission should remove the low latency option as a requirement for voice services before adopting the order.

2) The Commission should create deadlines, or at a minimum establish benchmarks, for processing and acting on § 214 discontinuance applications relating to technology transitions.

    i) AT&T proposed that a Public Notice should be released within 15 days of an application. Under the current process, the Public Notice is not released until approximately 60 days prior to the requested discontinuance date for dominant services (or 31 days for non-dominant services). This delay results in uncertainty to both the carrier and affected customers.

    ii) AT&T proposed that rather than removing a § 214 application from the automatic grant process, where no time limits exist whatsoever, the Commission could grant itself 30 additional days to consider an application, by which time it would have to either grant or deny the application.

3) Based on recent conversations with Staff, the proposal unnecessarily requires carriers to demonstrate Network Performance and Service Availability of its substitute service as a condition of the streamlined 214 process.

    i) Neither of these substitute criteria are necessary to protect consumers and business, which increases the burden of the streamlined process without providing a regulatory benefit.

        (1) The vast majority of POTS customers have moved to alternative services, which demonstrates that the replacement services are more than adequate.

        (2) The recommended substitute criteria, by their nature are unevenly applied – competitors (e.g. cable) offering alternative IP services are not required to meet the same standards.

        (3) Within an evolving marketplace, static metrics are likely to become obsolete and inconsistent with the trends in service requirements (including performance) that customers support.

ii) If the Commission cannot agree to eliminate these substitute criteria, they should be modified in the following ways:

(1) We understand the staff is proposing to include a 100 ms latency requirement under the network performance criterion. The latency metric should be increased to <200 ms mouth-to-ear.

(a) This is a threshold below which callers do not discern an impairment. - A threshold set below 200 ms would potentially and unnecessarily preclude the use of wireless services as substitutes - The broad adoption of wireless voice service demonstrates that <200 ms threshold is acceptable to users.[5]

(2) We understand that staff is proposing a network performance requirement that packet loss must be limited to .1%. The Packet Loss metric should be revised to .5%, 80% of the time. A threshold set at .1% would unnecessarily preclude the use of LTE wireless services as substitutes. Any packet loss below 1% is not discernable by the user.[6] A threshold of.5% is sufficient to meet even the most stringent customer's needs, including low-speed modem services such as home security alarms (discussed further below).

(3) We understand that Staff is proposing a network throughput requirement at or above 80% of the advertised speed at peak periods while supporting the same services/applications/functionalities as the legacy service. The Data Throughput metric is already covered under "Interoperability" and can be eliminated.

(a) A requirement that the substitute service support the same services/applications/functionalities as the legacy service is redundant to AT&T's proposal that the substitute service interoperate with widely adopted low-speed modem devices.

(i) Adopting a throughput requirement within a performance criterion forecloses the ability to set a sunset date for interoperability with widely adopted low speed modem devices.

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[5] Latency of 200 ms or less has no noticeable effect on voice quality. *See* "Implementing VoIP: A Voice Transmission Performance Progress Report" ("[O]ne-way delay of up to 200-ms does not introduce an obvious transmission impairment. This and other data have led us to relax our concerns about introducing VoIP networks and services that push end-to end delays into the 150–200 ms region"), IEEE Communications Magazine, July 2004 p. 38 ; *See also* http://www.ciscopress.com/articles/article.asp?p=357102 ("lab testing has shown that there is a negligible difference in voice quality mean opinion scores (MOS) using networks built with 200-ms delay budgets"); *See also* http://www.voip-info.org/wiki/view/QoS ("callers usually notice roundtrip voice delays at 250-ms or more").

[6] "Considering all the qualifying factors, we believe that VoIP networks must hold packet loss below 1 percent in order to deliver a level of voice quality that is public switched telephone network (PSTN) equivalent." *See* "Implementing VoIP: A Voice Transmission Performance Progress Report", IEEE Communications Magazine, July 2004 p.36.

(ii) Generally, low-speed modem devices require a 64kbs (bandwidth) codec on VoIP, which is comparable to the bandwidth provided by POTS.

(b) If retained, the Data Throughput metric should be revised to provide comparable data throughput to the legacy voice service being discontinued (e.g., 64kbps for POTS) and the metric should be sunset in 2025 along with the low-speed modem device requirement.

(i) Basing the metric on the advertised speed of the replacement product is illogical – a replacement service could fail the metric even when it provides significantly greater data throughput than the legacy service it is replacing.

(ii) For example, if an provider of an IP substitute service claims 1,000mbps throughput, it would fail this metric if it only achieves 799mbps, which is more than ten thousand times greater throughput than POTS, which it replaces.